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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,831	07/15/2003	Robert Bennitt	26333.925	9960

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EXAMINER

SAYOC, EMMANUEL

ART UNIT PAPER NUMBER

3746

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/619,831	Applicant(s) BENNETT ET AL.	
	Examiner Emmanuel Sayoc	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/15/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/15/2003</u> | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3746

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 29-34, 36-46, and 48-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennitt (U.S. 5,015,158), and in further view of Leyner (U.S. 849,333) and Snyder (U.S. 351, 665).

With respect to claims 29, 33, 34, 36, 41, 45, 46, 48, 49, and 53 Bennitt in Figure 1, teaches a fluid compressor comprising a housing (12) defining an internal bore (see Figure 3) and an outlet registering with the bore (52). At least one head (shown in Figures 4 and 5) communicates with the bore and is adapted to receive the fluid. An inlet valve assembly (30) disposed in the head (shown in Figures 4 and 5) for permitting the flow of the fluid from the head (shown in Figures 4 and 5) and into the bore (Figure 3) and for preventing the flow of fluid from the bore (Figure 3) to the at least one head (shown in Figures 4 and 5). At least one piston (Figure 2) with a valve (46, 46a) unit is mounted in the bore (Figure 3) for reciprocal movement and adapted to move in one direction to draw the fluid through the valve assembly (30) and into

Art Unit: 3746

the bore (Figure 3), and to move in the opposite direction to compress the fluid in the bore (Figure 3).

The Bennitt device differs from the claimed invention in that there is no explicit teaching of using a plurality of inlet valve assemblies disposed in the head and angularly spaced around the central axis of the bore.

Leyner in Figure 1, teaches an analogous piston pump with a plurality of inlet valve assemblies (36, 64, 35) disposed in the head (20, 21) and spaced around the central axis of the bore (6). The valve bodies (36) are movable within an inlet chamber (34, 26, 62). One of ordinary skill in the art would have known that plural inlets have advantages in situations where there are plural sources, for example in a multiple fluid mixing application, or for situations where increased inlet flow is required. Snyder in Figure 1 also teaches an analogous piston pump with angularly, with respect to the central axis of the bore (shown not enumerated), oriented inlet valve assemblies (C) and angularly oriented inlet chambers (H, F). Angularly spacing the valve assemblies was well known as a design choice for streamlining the inlet and outlet flow of fluid in and out of the bore. The angular orientation, as opposed to a tangentially (with respect to the bore axis), reduces flow resistance and turbulence induced by the axially moving piston and fluid.

Therefore it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the Bennitt device by incorporating a plurality of inlet valve assemblies disposed in the head spaced around the central axis of the bore and within an inlet bore, as taught by Leyner, and the angular orientation of the valve assemblies and inlet

Art Unit: 3746

chambers, as taught by Snyder, in order to allow increased or multiple inlet flow is with minimal flow resistance and turbulence.

With respect to claims 30, and 42, in the combination above, since the valve assemblies are in the head, it is obvious that the fluid passes from the head through the valve assemblies and into the bore.

With respect to claims 31, and 43, although the Bennitt device does not disclose a biased inlet valve, Leyner and Snyder both teach normally closed spring biasing (37 and L respectively) for their inlet valves to allow the inlet valve to respond only to a predetermined elevated pressure before allowing an inlet flow of fluid. Therefore it would have been obvious to one of ordinary skill in the art at time the invention was made to further modify the Bennitt, as modified by Leyner and Snyder, in order to allow the inlet valve to respond only to a predetermined elevated pressure before allowing an inlet flow of fluid for safety and efficiency purposes.

With respect to claims 32, 37, 38, 44 and 50 it is obvious from the combination above that as the piston moves from one side to another, fluid is alternately pumped from the inlet valves in the heads (Bennitt shown in Figures 4 and 5) into the chamber for compression (Bennitt Figure 3), through the piston valves (Bennitt 46, 46a), and out the outlet port (Bennitt 52). As seen in Figure 2, the piston is attached to a rod (40) that extends into the head and bore (shown in Figures 4 and 5) for reciprocal movement.

In claims 39, 40, 51, and 52, with respect to the exact number of inlet valve assemblies, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69

Art Unit: 3746

App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136. The exact number of inlet valve assemblies would have been a mere design choice.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 29 and 30 are rejected under the judicially created doctrine of double patenting over claim 1 of, Patent No. U. S. 6,655,935 B2 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent. In the same manner claims 31-53 are rejected under the judicially created doctrine of double patenting over claims 3-25, respectively of, Patent No. U. S. 6,655,935 B2.

In claims 29 and 30, the subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: A fluid compressor comprising a housing defining an internal bore and an outlet registering with the bore, at least one head containing a plurality of inlet valves in the at least one head angularly spaced around the central axis of the bore, a piston

Art Unit: 3746

valve assembly reciprocating within the bore to produce pumping from the inlet valves into the bore and out through an outlet. The only difference lies in that the claimed invention calls for at least one head and a series of inlet valves within that one head. The patented reference can be used as a patent rejection to the claimed invention.

Although claims 31-53, are not identical to corresponding claims 3-25 of the patented reference, the structure in these claims are covered by the patented reference.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application, which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are cited to further show the state of the art with respect to piston pumps.

U.S. Pat. 821,299 to Lavoie.

U.S. Pat. 6,663,361 B2 to Kobl et al.

U.S. Pat. 851,248 Niebling.

Art Unit: 3746


Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Sayoc whose telephone number is (703) 305-0054.


The examiner can normally be reached on M-F 8 A.M. - 6 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (703) 308-2675. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Emmanuel Sayoc
Examiner
Art Unit 3746

ECS


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8/9/04